



2. Radio communications apparatus according to claim 1, further comprising:

a third voltage-controlled oscillator;

a second mixer for frequency-converting the output signal of the first band-pass filter based on the output signal of the third voltage-controlled oscillator; and

a second band-pass filter for outputting a signal obtained by filtering the component in a predetermined frequency band of the output signal of the second mixer as a second transmission signal.

3. Radio communications apparatus according to claim 1, further comprising:

a second mixer for frequency-converting the output signal of said first band-pass filter based on the output signal of the second voltage-controlled oscillator; and

a second band-pass filter for outputting a signal obtained by filtering the component in a predetermined frequency band of the output signal of the second mixer as a second transmission signal.

4. Radio communications apparatus according to claim 1, further comprising:

a first transmitter for amplifying a first transmission signal output from the first voltage-controlled oscillator and

transmitting the resulting signal via an antenna; and

a second transmitter for amplifying a second transmission signal output from the first band-pass filter and transmitting the resulting signal via an antenna.

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5. Radio communications apparatus according to claim 2, further comprising:

a first transmitter for amplifying a first transmission signal output from the first voltage-controlled oscillator and transmitting the resulting signal via an antenna; and

a second transmitter for amplifying a second transmission signal output from the second band-pass filter and transmitting the resulting signal via an antenna.

15           6.     Radio communications apparatus according to claim  
3, further comprising:

a first transmitter for amplifying a first transmission signal output from the first voltage-controlled oscillator and transmitting the resulting signal via an antenna; and

a second transmitter for amplifying a second transmission signal output from the second band-pass filter and transmitting the resulting signal via an antenna.